Remarks

In view of the above amendments and the following remarks, reconsideration and further examination are requested.

Claims 24 and 27 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Uzoh (US 6,140,234) in view of Kishi (US 5,437,777). Claim 25 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Uzoh ('234) in view of Kishi and further in view of Ting (US 6,017,437). Claim 26 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Uzoh ('234) in view of Kishi and further in view of Patton (US 6,156,167). Claim 28 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Uzoh ('234) in view of Kishi and further in view of Lando (US3,776,770). Claims 29 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Uzoh ('234) in view of Kishi and further in view of Uzoh (US 6,117,784) and Miyazawa (US 4,303,443). Claims 30-35 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Uzoh ('234) in view of Kishi and further in view of Uzoh ('784) and either Dahms (US 5,849,171) or Dahms (US 5,433,840).

Claims 24-35 have been canceled without prejudice or disclaimer to the subject matter contained therein. New claims 36-48 have been added. It is submitted that new claims 36-48 are patentable over the references relied upon in the rejections for the following reasons.

Claim 36 is patentable over the combination of Uzoh ('234) and Kishi, since claim 36 recites an apparatus including a frame; a transfer mechanism disposed in the frame; and a plurality of processing units disposed in the frame so as to surround the transfer mechanism. The combination of Uzoh ('234) and Kishi fails to disclose or suggest these features of claim 36.

Uzoh ('234) discloses a method to selectively fill recesses with a conductive metal. The method includes depositing a seed layer 6 with either a CVD method or an electroless plating method on a barrier layer 4 of an insulating layer. A conductive metal 8 is then electroplated in recesses of the seed layer 6. (See column 3, lines 55-67 and column 4, lines 24-26).

While Uzoh ('234) discloses deposing the seed layer 6 with either CVD method or the electroless plating method and electroplating the conductive metal 8 of the seed layer 6, Uzoh ('234) fails to disclose or suggest a frame, a transfer mechanism disposed in the frame; and a plurality of processing units disposed in the frame so as to surround the transfer mechanism.

Kishi discloses an electroless Au-plating system that includes an unload/load unit 17 for loading and unloading semiconductor wafers 1, a spin processor unit 18 for water-washing and drying the semiconductor wafers 1, a feed robot unit 19 for inverting and feeding the semiconductor wafers 1, and a plurality of treatment tanks 3a to h. (See column 4, lines 1-9 and Figure 4).

While Kishi discloses the feed robot 19 and the plurality of treatment tanks 3a to h, it is apparent that Kishi fails to disclose or suggest a frame as recited in claim 36. Further, it is apparent from the illustration in Figure 4 that Kishi fails to disclose or suggest that the treatment tanks 3a to h are disposed in a frame so as to surround the feed robot unit 19. Instead, the treatment tanks 3a to h are in rows along one side of the feed robot unit 19. As a result, the combination of Uzoh ('234) and Kishi fails to disclose or suggest the present invention as recited in claim 36.

As for (1) Ting, (2) Patton, and (3) Lando, these references are relied upon as disclosing (1) spinning a wafer 35 to enhance rinsing and drying, (2) shields 69A and 69B provided to shape an electric field, and (3) electroless plating and electroplating baths, respectively. However, Ting, Patton and Lando all fail to disclose or suggest the above-discussed features of claim 36.

Uzoh ('784) discloses a process for integrated circuit wiring. The process includes either electroplating or electroless plating a metal in opening in a photoresist pattern to form the wiring. (See column 3, line 37 - column 4, line 20). However, Uzoh ('784) fails to disclose or suggest the above-discussed features as recited in claim 36.

As for Miyazawa, it is relied upon as disclosing an electroless copper plating solution. However, Miyazawa fails to disclose or suggest the above-discussed features as recited in claim 36.

As for (1) Dahms ('840) and (2) Dahms ('171), these references are relied upon as disclosing (1) an acid bath for the galvanic deposition of copper, and (2) and an acid bath for copper plating, respectively. However, (1) Dahms ('840) and (2) Dahms ('171) fail to disclose or suggest the above-discussed features as recited in claim 36.

Since none of the above-discussed references discloses or suggests the present invention as recited in claim 36, it is submitted that no combination of the references discloses or suggests the invention because all of the references are lacking the same features of claim 36.

Because of the above mentioned distinctions, it is believed clear that claims 36-48 are allowable over the references relied upon in the rejections. Furthermore, it is submitted that the

distinctions are such that a person having ordinary skill in the art at the time of invention would not have been motivated to make any combination of the references of record in such a manner as to result in, or otherwise render obvious, the present invention as recited in claims 36-48. Therefore, it is submitted that claims 36-48 are clearly allowable over the prior art of record.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance. The Examiner is invited to contact the undersigned by telephone if it is felt that there are issues remaining which must be resolved before allowance of the application.

Respectfully submitted,

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